REMARKS

Office Action Prematurely FINAL and Interview

The interview Examiner Jeanette Chapman granted Applicant's attorney on March 20, 2006 is gratefully acknowledged. In response to the undersigned's question as to the current practice of being able to cite a new reference and make an action FINAL, she said that new issues had to be involved. It is respectfully submitted that the applicant's amendment response to the reopening of the prosecution did not raise any new issues to require a new search and the citing of the Hibbard reference. In fact, Applicant's amendment narrowed the issues and presented nothing new that has not been before presented. That is, ***all issues before the PTO have not changed since original claims 1-8***. The Final rejection is, therefore, not necessitated by Applicant's amendment, and is premature.

In original claim 1, Applicant set forth "reinforcement rod suspending means" to be attached "to said opposed wall forming panels for locating said horizontally disposed [reinforcement] rod means at spaced preselected vertical locations between said spaced molding surfaces." The "rod suspending means [is] effective to retain said reinforcement rod means in place at said preselected horizontal and vertical locations while said hardenable material is being poured into and allowed to harden within said mold cavity." Original claim 2 states that the "rod suspending means" of claim 1 "includes grid means that extends vertically along the vertically disposed molding surfaces." And original claim 3 characterizes the "grid means" of claim 2 as "sufficiently rigid to project outwardly from a vertically disposed molding surface and to horizontally suspend the reinforcement rod means when said grid means is attached to said vertically disposed molding surface." Applicant's amendment merely substituted "grid means" for "rod suspending means" in claim 1.

Original claim 5 says the "rod suspending means" of original claim 1 "includes a plurality of vertically disposed [grid] means spaced horizontally with respect to each other along said opposed spaced molding surfaces;" that "said reinforcement rod means includes a plurality of rod elements ... horizontally disposed across said plurality of grid means;" and that the "rod elements extend substantially parallel to the molding surfaces and are laterally spaced with respect to each other between said molding surfaces."

The examiner rejected claims 1-5 as anticipated by U.S. Patent 5,431,368 (Wilde) under 35 U.S.C. 102(b) stating that Wilde "shows reinforcement rod suspending means (10) with means for attaching the rod suspending means to opposed wall forming panels (22)." He then stated that

"Wilde shows grid means (27, 18) that extends vertically along the vertically disposed molding surface (15)" of ***Wilde's forming panels 22***, and which "grid means" is not included in rod suspending means 10 of Applicant's claims. The examiner's referenced "grid means (27, 18)" he said "is sufficiently rigid" in rejecting claim 2, but then ***erroneously*** states that "the rod suspending means (10) includes a vertically disposed [grid] means (18) spaced horizontally with respect to each other along the opposed spaced molding surfaces (15)." In fact, Wilde grid means 18 are part of forming panels 22 that form the molding surfaces, not part of the Wilde rod suspending means 10.

Applicant's original claim 6 states that the "rod suspending means" of original claim 1 "includes a plurality of grid elements that extend vertically along the vertically disposed molding surfaces and between the opposed molding surfaces," wherein "each grid element includes a plurality of tie members horizontally disposed at spaced preselected vertical locations." The grid elements include "rod locating means for maintaining said reinforcement means at said vertical locations and horizontally spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity." Original claim 7 more specifically defines the "rod locating means" of original claim 6. Original claim 8 more specifically sets forth the "reinforcement rod means" if original claim 1. The prior examiner said that claims 6-8 would be allowable if rewritten to include all the limitations from which they depended. Applicant amended his claims to be allowed.

Despite Applicant's amendment that should have placed the application in condition for allowance, the new examiner has cited a new reference patent to Hibbard and for the first time rejected amended claims 1 and 3-7, and new claims 48-50 under 35 U.S.C. 103(a) as being unpatentable over Hibbard (4,768,324) in view of Wepf (4,234,156) and made the rejection FINAL. Applicant does not understand how his amendment necessitates the new ground(s) of rejection. For Hibbard does not disclose Applicant's claimed structure before or after amendment.

The examiner's states that Hibbard shows "a plurality of grid means 18/28/24/26 suspended along the vertically disposed molding surfaces in the cavity." Each Hibbard vertical ladder 18 "is a rigid structure composed of a pair of parallel, vertical members 24,26 extending the full vertical height of the wall10. A plurality of rigid cross members 28 extend between the vertical members 24,26 and are spaced apart along the vertical height of the vertical ladder 18." (*See* Hibbard, col. 4, ls. 4-9.) In other words, Hibbard "18/28/24/26" elements are ***not*** "grid means" as alleged but vertical ladders fixedly held between sections of **(NOT suspended from)** a "rigid insulation core through

which the vertical ladder structures extend transversely." In any event the new examiner inappropriately equate Hibbard's "rigid cross members 28" to Applicant's horizontally disposed reinforcement rods.

Hibbard states that at "each interface between the panels 20,21 there is a transversely positioned vertical ladder 18 which extends through the junction 22 between individual insulation panels 20,21." (*See* col. 3, ls. 65-68.) The ladder structures 18/28/24/26 are **NOT** "grid means" "suspended along the vertically disposed molding surfaces in the cavity." Ladder structures 18/28/24/26 are placed one at a time between each panel 20,21, and are not suspended from molding forms 60/62 as shown. In short, Hibbard must first position three parallel panels 60, 62, and 20 before placing his ladders for connection to the three parallel panels with horizontal trusses 64. A very complex process.

Before Applicant's amendment, claim 1 included "a plurality of grid elements each having a plurality of elongate elements ***that extend vertically along*** and are substantially parallel to the vertically disposed molding surfaces." The examiner confirms Applicant's position when she states that "Hibbard lacks the means for attaching the grid means to the opposed panels 60/62 to retain the rods in place at a plurality of vertically spaced locations while the hardenable material is poured into the cavity and allowed to harden." So the examiner recognizes that Applicant's grid means are attached to the molding surface. Yet she equates the Hibbard ladders 18/28/24/26 to grid means and his cross members 28 to "reinforcement rods." For she states that the Hibbard "grid elements include rod locating means 24/26 for maintaining the reinforcement rods 28 at horizontal locations." So she equates one member of Hibbard to two of Applicant's different, distinctly claimed members.

Applicant's amendment does not justify citing Hibbard, which has no structure usable in Applicant's invention. Since the citation of Hibbard to support new grounds of rejection was not necessitated by the presentation of new issues caused by Applicant's amendment, the finality of the Office action is respectfully deemed premature and improper.

Claim 5 Objection under 35 U.S.C. § 112

Claim 5 was amended after the first examiner reopened prosecution as follows:

5 (currently amended): ~~A forming~~ An assembly as defined in claim 1 wherein

said plurality of ~~vertically disposed grid elements are~~ grid means is laterally spaced horizontally with respect to each other along said opposed ~~spaced~~ molding surfaces,

said reinforcement rods are horizontally freely disposed across said plurality of ~~tie members~~

grid means, and

said reinforcement rods extend substantially parallel to the molding surfaces and are laterally spaced with respect to each other between said molding surfaces.

Before the amendment, lines 4-5 read: "said reinforcement rods are horizontally disposed across said plurality of tie members," yet the language was not objected to under 35 U.S.C. § 112. Now, however, with only the addition of "freely" before "disposed" and "grid means" replacing "tie elements," the new examiner objects to the amendment under 35 U.S.C. § 112. Thus, another reason exists for the Finality of the new office action to be premature.

Proposed currently amended claim 5 now reads:

5 (currently amended): An assembly as defined in claim 1 wherein

said plurality of grid means is laterally spaced horizontally with respect to each other along said opposed molding surfaces,

said reinforcement rods are horizontally freely disposed contiguously on and transversely across said plurality of grid means, and

said reinforcement rods ~~extend substantially parallel to the molding surfaces and~~ are laterally spaced with respect to each other between said molding surfaces.

So regarding to claim 5, lines 4-5 now read:"said reinforcement rods are horizontally freely disposed contiguously on and transversely across said plurality of grid means," and hopefully the current amendment overcomes the examiner's new objection under 35 U.S.C. § 112.

Moreover, the deletion of the phrase, "extend substantially parallel to the molding surfaces and," and its proposed insertion into claim 1 is necessitated by the examiner's erroneous reading of Hibbard cross members 28 as equivalent to Applicant's horizontally disposed reinforcement rods 24 contiguously on and transversely across Applicant's grid means (grid elements) 25/26/27/28.

Applicant's Claim 17 Should Have Been Acted On

Claim 17 was made dependent on claim 48 in Applicant's amendment submitted after the former examiner reopened prosecution of this case. However, the new examiner overlooked this fact when acting on Applicant's claims and did not cite any reference that showed the limitations of this claim. For this reason, the Finality of the outstanding office action is premature.

Re-institute Claims 9-10, 14-16, 28-29, and 31-35

Independent claim 9, as amended, is directed to a "grid device for horizontally disposing reinforcement rods in a poured-in-place wall mold cavity defined by opposed molding surfaces of

opposed vertically disposed wall molding panels," and is currently amended to include the limitations of former claim 12 and of currently amended withdrawn claim 10. Claims 14-16 depend from independent claim 9 and further limit the claimed grid device to necessarily be part of Applicant's invention of claims 1, 3-7, 17, and 48-50 that require use of the claimed grid device of claims 9 and 14-16. The examiner need not conduct a further search for Applicant's claimed grid device that is useful for no other purpose than to make the assembly of claims 1, 3-7, 17, and 48-50.

The original requirement for restriction of Group II claims 9-16 was based on being drawn to an invention classified in class 52, subclass 677 while the Group I claims 1-8 was based on being drawn to an invention classified in class 249, subclass 40. The former examiner then proceeded to make the restriction of the invention on the basis of a species restriction without a generic claim in citing MPEP Sections 806.04(b) and 806.04(h).

MPEP Section 806.04 reads:

> Where an application includes claims directed to different embodiments or species that could fall within the scope of a generic claim, restriction between the species may be proper if the species are independent or distinct. However, 37 CFR 1.141 provides that an allowable generic claim may link a reasonable number of species embraced thereby. The practice is set forth in 37 CFR 1.146.

MPEP Section 806.04(d) defines a generic claim as follows.

> In an application presenting three species illustrated, for example, in Figures 1, 2, and 3, respectively, a generic claim should read on each of these views; but the fact that a claim does so read is not conclusive that it is generic. It may define only an element or subcombination common to the several species.
>
> In general, a generic claim should require no material element additional to those required by the species claims, and each of the species claims must require all the limitations of the generic claim.

MPEP Section 806.04(h) states when multiple species must be patentably distinct.

> In making a requirement for restriction in an application claiming plural species, the examiner should group together species considered clearly unpatentable over each other.

Applicant's application illustrates the claimed assembly and grid device in his Figures 3 and 4 that do not show more than one species of the grid device that is necessarily used in the claimed assembly. Applicant does not understood how Groups I and II inventions are "mutually exclusive

species in an intermediate final product" when the assembly is the final product and the grid device is an essential part of the claimed final product. To be a complete search, both classes, namely, class 52, subclass 677 and class 249, subclass 40, should have been searched for the claimed Group I invention since both sets of claims relate to a poured-in-place wall structure mold cavity.

In view of the foregoing, claims 9-16, as amended, should be re-instituted in the application and deemed allowable for the reasons stated in response to the rejection of assembly claims over Hibbard in view of Wepf.

Claims 28, 29 and 31-35 are directed to a "method for producing a vertically disposed poured-in-place wall structure having horizontally disposed reinforcement rods" that provides wall molding means that form a mold cavity, and "a plurality of grid means for extending vertically along the vertically disposed molding surfaces and being sufficiently rigid for freely positioning and retaining said reinforcement rods horizontally along said first molding surface at a preselected horizontal location laterally spaced from said first molding surface and at preselected vertical locations spaced along said first molding surface."

The former examiner said that "the process for using the product [assembly] as claimed can be practiced with another materially different product" ***or*** "the product as claimed can be used in a materially different process of using the product" and cited MPEP Section 806.05(h). The examiner then states that in "the instant case a forming method can be accomplished by chiseling rough concrete." Applicant does not understand how the method of using the claimed assembly can be "practiced with another materially different" assembly. For the claimed process specifically provides the product that is set forth in the Group I assembly claims. So the process cannot be practiced "with another materially different product" as alleged.

Moreover, the former examiner's suggested "forming method" of "chiseling rough concrete" is incomprehensible to Applicant who does not understand how anyone can effect "chiseling rough concrete" with the claimed assembly. Therefore, Applicant respectfully requests that method claims 28, 29 and 31-35, as amended, be re-instituted in the application and deemed allowable for the reasons stated in response to the rejection of assembly claims over Hibbard in view of Wepf.

Applicant's Invention

Applicant addressed the problem of freely positioning horizontally disposed reinforcement rods and suspending them at preselected horizontal and vertical locations within a mold cavity, and maintaining them in position while pouring concrete into the mold cavity and allowing it to harden.

At the same time, Applicant desired a simply constructed assembly to perform a poured-in-place concrete method that an indigenous labor force of any nation could be employed and trained to provide affordable housing for people in developing countries throughout the world.

Applicant's novel concrete, poured-in-place wall forming unit solves the problem; is very simple in construction; and assembles easily and quickly. Consequently, a concrete building fit for occupancy can be completed within three (3) to four (4) days from entry onto a building site. A concrete slab 20 having upstanding wall portions 21 defining internal and external wall segments is first made at the building site using well known concrete mold fabrication techniques in accord with a preselected building floor plan. *See* Applicant's Figures 1 and 2. A first wall forming panel vertically disposed along one wall segment of an opposed upstanding wall portion provides a first molding surface along one side of a wall mold cavity.

Once the first molding surface is erected, a first edge of a plurality of reinforcement rod suspending elements or grid means 25 is then attached to extend along the length of first wall forming panel 22 and to project outwardly from the first molding surface. Reinforcement rods 24 are then freely positioned to horizontally contiguously rest on rod suspending tie members 28 of grid means 25. Rods 24 are disposed substantially parallel to and at a spaced horizontal distance from the first molding surface, and placed at a plurality of preselected vertical locations spaced upwardly along the first molding surface as shown in Figure 3. A second wall forming panel 30 is then vertically disposed along the opposed wall segment of the upstanding wall portion 21 to provide a second opposed molding surface for attachment to a second distal edge of the plurality of grid means 25 thus forming the desired wall mold cavity ready to receive hardenable material therein.

Reinforcement rod suspending means or grid means is effective to retain the reinforcement rods in place at preselected horizontal and vertical locations while the hardenable material is being poured into and allowed to harden within the mold cavity.

APPLICANT'S ARGUMENT

The Rejection

Claims 1, 3-7, and 48-50 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hibbard (U.S. Patent 4,768,324) in view of Wepf (U.S. Patent 4,234,156). The examiner states that it "would have been obvious to one of ordinary skill in the art to modify Hibbard to include the grid retaining means of Wepf to secure the grid in place while the hardenable material is poured and is allowed to harden. With the modification of Wepf, the grid means has a sufficient amount of rigidity

to project outwardly from a molding surface and to horizontally suspend the rods when the grid means is attached to the molding surface."

Hibbard and Wepf both disclose assemblies for producing poured-in-place wall structures that address completely different problems with respect to each other. And each assembly of Hibbard and Wepf addresses a completely different problem in their process of producing wall structures in the poured-in-place wall-forming field than the problem Applicant addresses with his assembly. Hibbard solves a problem of fixedly disposing an insulation core between the two molding panels forming the mold cavity, and Wepf solves a water seepage problem related to the use of tie members. Applicant solves the problem of maintaining freely positioned, horizontally disposed reinforcing rods suspended at preselected horizontal and vertical locations within a mold cavity while pouring concrete into the mold cavity and allowed to harden. Neither the Hibbard or Wepf discloses an assembly that solves Applicant's problem.

More Specifically

Applicant's Claim 1: Neither Hibbard or Wepf discloses "a plurality of grid means suspended along the vertically disposed molding surfaces in said mold cavity for contiguously supporting said horizontally extending reinforcement rods which are freely contiguously disposed at a plurality of vertically spaced locations within said mold cavity." Applicant's "grid means" 25/26/27/28 contiguously support horizontally extend reinforcement rods 24a-24f. (That is, rods 24a-24f rest directly on – "touch" – "grid means" 25/26/27/28.) Applicant's rods 24a-24f are "disposed at a plurality of vertically spaced locations within said mold cavity." Applicant claims "means for attaching said grid means [25/26/27/28] to said opposed wall forming panels to retain said reinforcement rods in place at said plurality of vertically spaced locations while said hardenable material [concrete] is being poured into said mold cavity and allowed to harden." (*See* Applicant Figures 3 and 4.)

The examiner says that Hibbard ladder structures 18 include cross members 28 and vertical member 24,26 are equivalent to Applicant's grid means. But then says that cross members 28 (that are fixedly attached to vertical members 24, 26) are equivalent to Applicant reinforcing rods 24a-24f that are "freely contiguously disposed at a plurality of vertically spaced locations." Hibbard ladder structures 18 are not attached to the opposed wall forming panels 60/62 as Applicant claims. Yet the examiner says that Hibbard ladder structures 18 are equivalent to BOTH Applicant "grid means" and

"reinforcing rods 24a-24f" that are separate and distinct elements in Applicant claim 1.

The examiner says that Wepf grids 16/18 are "attached to the opposed panels." Wepf Figure 1 shows that grids 16/18 are ***NOT*** "attached to the opposed panels" 12/14. Tie bars 10 are attached to panels 12/14, and vertical reinforcement rods 80,82 of grids 16/18 are attached to tie bars 10. The horizontal reinforcement rods of grids 16/18 are not contiguously disposed on tie bars 10 as Applicant claims but are attached to vertical reinforcement rods thus teaching away from Applicant's claimed structure.

Applicant's Claim 3: Neither Hibbard or Wepf discloses Applicant grid means having "a sufficient amount of rigidity to project outwardly from a vertically disposed molding surface and to horizontally suspend the reinforcement rods when said grid means is attached to said vertically disposed molding surface." Hibbard ladder structures 18 and Wepf grids 16/18 are ***NOT*** are not "attached" to a vertically disposed molding surface (as explained above) "to project outwardly from [the] vertically disposed molding surface and to horizontally suspend the reinforcement rods" to retain them in place at the plurality of vertically spaced locations while concrete is being poured into the mold cavity and allowed to harden. So even if the combination of Hibbard and Wepf were appropriate, the one having ordinary skill in the art would not be lead to do what Applicant claims.

Applicant's Claim 4: Neither Hibbard or Wepf discloses "means for vertically disposing said wall forming panels [to be] effective to maintain said wall forming panels independently with respect to each other in said vertical disposition." Hibbard two trusses 64 fixedly attached each pair of his vertically disposing wall forming panels 60/62 to be **DEPENDENT** on each other so as to allow the fixed disposition of insulation core 20/21 between forming panels.

Applicant's Claim 5: Neither Hibbard or Wepf discloses a "plurality of grid means... laterally spaced horizontally with respect to each other along said opposed molding surfaces" with "said reinforcement rods [being] horizontally freely disposed contiguously on and transversely across said plurality of grid means" wherein "said reinforcement rods ~~extend substantially parallel to the molding surfaces and~~ are laterally spaced with respect to each other between said molding surfaces." The examiner agrees with Applicant that "Hibbard lacks the means for attaching the grid means (ladder structures 18) to the opposed panels 60/62 to retain the rods in place at a plurality of vertically spaced locations while the hardenable material is poured into the cavity and allowed to harden." But the examiner looks to Wepf in stating that grids 16/18 are "attached to the opposed

panels" when, in fact, grids 16/18 are attached to special tie bars 10 designed to keep grids 16/18 out of touch with the opposed panels. So even if the combination of Hibbard and Wepf were justified (which it is not), the resultant structure would still not meet Applicant's claim language.

Applicant's Claim 6: Neither Hibbard or Wepf discloses "a plurality of grid means suspended along the vertically disposed molding surfaces in said mold cavity for freely positioning and retaining freely contiguously disposed, horizontally extending reinforcement rods substantially parallel to said molding surfaces at a preselected horizontal location spaced inwardly from each said opposed molding surface within said mold cavity, and means for attaching each said grid means to said opposed wall forming panels for locating said horizontally disposed reinforcement rods at spaced preselected vertical locations between said spaced molding surfaces [and being] effective to retain said reinforcement rods in place at said preselected horizontal and vertical locations while said hardenable material is being poured into and allowed to harden within said mold cavity." Applicant's comments regarding the Hibbard and Wepf teachings related to claim 1 apply equally here with respect to his claim 6.

And neither Hibbard or Wepf discloses "a plurality of elongate grid elements that extend vertically along the vertically disposed molding surfaces and between the opposed molding surfaces" wherein each elongate, vertical grid element is "fixedly attached to a plurality of tie members that are substantially perpendicular to the molding surfaces and horizontally disposed at spaced preselected vertical locations for contiguously supporting said freely contiguously disposed, horizontal reinforcement rods." Hibbard discloses lock pins 52/54 that attach horizontal ladders 30,32/40/44 to cross members 28 between vertical elements 24/26 and opposed surfaces of insulation core 20/21 to fixed core 20/21 medially between forming panels 60/62. Considering the examiner's erroneous holding that horizontal ladders 30,32/40/44 are truly horizontal reinforcement rods, such core members 28 **do not** contiguously support "freely contiguously disposed, horizontal reinforcement rods" that lock pins 52/24 attach to cross members 28. In other words, Hibbard teaches away from the language of claim 6.

Moreover, neither Hibbard or Wepf discloses grid elements "including rod locating means 26/27 for maintaining said reinforcement rods at horizontal locations spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity." Hibbard lock pins 52/54 maintain horizontal ladders 30,32/40/44 at his disclosed horizontal locations. And

Wepf discloses vertical reinforcement rods 80,82 tied to flanges 22/24 and horizontal reinforcement rods tied to vertical rods 80,82. So neither reference discloses maintaining alleged reinforcement rods "freely contiguously disposed" when on "contiguously supporting" Hibbard cross members 28 or Wepf tie bars 10. So even if the Hibbard and Wepf combination were justified (which it is not), the resultant structure would still not meet the specific limitations of Applicant claim 6.

Applicant's Claim 7: Neither Hibbard or Wepf discloses "rod locating means [that] includes a pair of elongated substantially parallel, vertically disposed elongate elements fixedly extending across said plurality of vertically spaced tie members at each horizontal location between said molding surfaces to freely retain a reinforcement rod that extends horizontally across and normal to the plurality of vertically disposed elongate grid elements." Hibbard vertical elements 24,26 **do not** "freely retain" horizontal ladders 30,32/40/44. For lock pins 52/54 fixedly attach the horizontal ladders to cross members 28 at his disclosed horizontal locations so that they do not move for maintaining insulation core 20/21 in place when concrete is poured into the mold cavity. Horizontal ladders serve a completely different purpose than Applicant's rods 24a-24f that are freely contiguously disposed on the horizontal grid tie elements while being freely retained between the parallel, vertically disposed elongate elements 26,27. Wepf reinforcement rods 80,82 are fixedly attached to (not freely retained by) a double flange mechanism of tie bars 10. No "pair of elongated substantially parallel, vertically disposed elongate elements" exist in Wepf. So even if the Hibbard and Wepf combination were justified (which it is not), the resultant structure would still not meet the specific limitations of Applicant claim 7.

Applicant's Claim 48: Neither Hibbard or Wepf discloses "a plurality of grid means suspended within said mold cavity for contiguously supporting said horizontally extending reinforcement rods so as to be freely contiguously disposed on said grid means" that is "effective to retain the freely contiguously disposed reinforcement rods substantially parallel to said molding surfaces at a plurality of horizontal locations vertically spaced along and between said opposed wall surfaces." The proposed amendment is necessitated to respond to the examiner's erroneous holding that Hibbard cross members 28 are equivalent to Applicant's reinforcement rods. Even if the amendment is not entered, Hibbard cross members 28 **are not** "freely contiguously disposed on said grid means" but are fixedly connected to vertical elements 24,26. So Hibbard does not teach the structure of claim 48.

Neither Hibbard or Wepf discloses "means for removably attaching said grid means to said opposed wall molding panels at laterally spaced horizontal distances with respect to each other to retain said reinforcement rods in place while hardenable material is being poured into said wall mold cavity and allowed to harden." The examiner agrees with Applicant that "Hibbard lacks the means for attaching the grid means (ladder structures 18) to the opposed panels 60/62 to retain the rods in place at a plurality of vertically spaced locations while the hardenable material is poured into the cavity and allowed to harden." But the examiner looks to Wepf in stating that grids 16/18 are "attached to the opposed panels" when, in fact, grids 16/18 are attached to special tie bars 10 designed to keep grids 16/18 out of touch with the opposed panels. So even if the combination of Hibbard and Wepf were justified (which it is not), the resultant structure would not meet Applicant's claim language.

Applicant's Claim 49: Neither Hibbard or Wepf discloses "horizontal tie members" that "provide contiguous support for said reinforcement rods" so that the reinforcement rods are "freely contiguously resting on said horizontal tie members at laterally spaced distances inwardly from each said opposed molding surface." Hibbard lock pins 52/54 fixedly attach the horizontal ladders to cross members 28 so that the horizontal ladders do not move for maintaining insulation core 20/21 in place when concrete is poured into the mold cavity. So horizontal ladders serve a different purpose than Applicant's rods 24a-24f that are "freely contiguously resting on" the horizontal grid tie elements. Wepf reinforcement rods 80,82 are fixedly attached to (not freely retained by) a double flange mechanism of tie bars 10, and Wepf's horizontal reinforcement rods **do not** rest on tie bars 10 but are fixedly tied to reinforcement rods 80,82. So even if the Hibbard and Wepf combination were justified (which it is not), the resultant structure does not meet the limitations of Applicant claim 49.

Applicant's Claim 50: Neither Hibbard or Wepf discloses "grid means" that have "a plurality of tie members [that is] effective to contiguously, freely support the horizontally disposed reinforcement rods at a preselected horizontal location spaced inwardly from each said molding surface within said mold cavity." Applicant's comments regarding the teachings of Hibbard and Wept and their combination as stated for claim 6 above, apply here.

Applicant's Claim 17: This claim was made dependent on claim 48 in Applicant's amendment submitted after the former examiner reopened prosecution of this case. So claim 17 should have been acted on by the new examiner, but she did not. Nevertheless, neither Hibbard or

Wepf discloses "at least two reinforcement rods [that] are each freely positioned horizontally [on said grid means] at a spaced inward distance from the opposed molding surfaces and at a spaced outward distance from a centerline located between said opposed molding surfaces." Hibbard lock pins 52/54 fixedly attach his horizontal ladders to cross members 28 so that the horizontal ladders do not move for maintaining insulation core 20/21 in place when concrete is poured into the mold cavity. So horizontal ladders serve a different purpose than Applicant's rods 24a-24f that "each [are] freely positioned horizontally [on said grid means] at a spaced inward distance from the opposed molding surfaces and at a spaced outward distance from a centerline located between said opposed molding surfaces." Wepf reinforcement rods 80,82 are fixedly attached to a double flange mechanism of tie bars 10, and Wepf's horizontal reinforcement rods **do not** rest on tie bars 10 but are fixedly tied to reinforcement rods 80,82. So even if the Hibbard and Wepf combination were justified (which it is not), the resultant structure does not meet the limitations of Applicant claim 17.

No Basis for Combining References

No teaching, suggestion, or motivation exists for combining the Hibbard or Wepf references that do not teach, suggest, or would motivate a person having ordinary skill in the art to produce a plurality of grid means that maintains reinforcement rods in a plurality of horizontal and vertical locations within a wall mold cavity when pouring hardenable material into the mold cavity. So even if the combination of Hibbard and Wepf were appropriate under the Patent Law, their combined teaching would not suggest or motive a person having ordinary skill in the art to do what Applicant is claiming. Therefore, a person having ordinary skill in the art would not be lead to perform Applicant's claimed invention by following the combined teachings.

Wepf's "grid retaining means" consists of a plurality of tie members 10 that retain his grid 16/18. Thus, the examiner proposes "to include" Wepf's tie members 10 to retain Hibbard's "grid" in place while pouring hardenable material into the mold cavity. How that is to be done is a mystery because Hibbard discloses no "grid" or "grid means" such as Applicant's grid means attached to a molding surface for producing Applicant's claimed desired results.

Further, no teaching in either reference suggests their combination, or how one having ordinary skill in the art can do what the examiner suggests without removing Hibbard's vertical and horizontal ladders. For Hibbard has an insulation core disposed between two opposed molding surfaces. How a skilled artisan is to accomplish the examiner's proposed modification of Hibbard

without removing his insulation core is unclear. Yet the Hibbard "grid means" (structure unknown) is to gain "a sufficient amount of rigidity to project outwardly from a molding surface and to horizontally suspend the rods when the [unknown] grid means is attached to the molding surface" by using Wepf's tie members 10. Evidently, Hibbard's "grid means" does not have the requisite rigidity without "the modification of Wepf" to perform Applicant's claimed functions.

Applicant respectfully submits that to combine the teachings of Hibbard and Wepf requires removal of Hibbard's insulation core with its vertical and horizontal ladders thus rendering Hibbard unsatisfactory for its intended purpose and changes the principle of operation of Hibbard's structure.

Legal Principles of Obviousness To Be Applied

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. *In re Kotzab,* 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no teaching, suggestion, or motivation in either Hibbard or Wepf to combine them to establish a *prima facie* case of obviousness of Applicant's invention.

There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). Hibbard and Wepf do not address Applicant's problem nor do the reference disclose a grid means for effecting Applicant's recited functions related to positioning horizontal reinforcement rods for the hardenable concrete substantially parallel to the molding surfaces formed by the molding panels.

In determining the propriety of the Patent Office case for obviousness in the first instance, it

is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). The Hibbard and Wepf teachings are clearly insufficient for one having ordinary skill in the poured-in-place wall structure field having the references before him to make the proposed substitution, combination, or other modification that the examiner suggests.

To establish *prima facie* obviousness of Applicant's claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in Applicant's claims must be considered in judging the patentability of those claims against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Neither Hibbard or Wepf include structure that performs Applicant's claimed various means plus their specified functions.

The examiner must take into account only knowledge which was within the level of ordinary skill in the art at the time Applicant's claimed invention was made and should not include knowledge gleaned only from Applicant's disclosure. Where, as in the present rejection, the basis for the combination of references is likening Applicant's claim language to a multiple number of different reference structures, such a reconstruction is improper. *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

Hibbard Patent 4,768,324

The Hibbard invention relates to insulated building walls having outer layers of poured concrete and an inner layer of rigid insulation therebetween. Hibbard relates to the problem of how an insulation core can be fixedly supported medially of wall forming panels 60/62. Hibbard's problem is unrelated to Applicant's problem of how to suspend reinforcement rods at a plurality of horizontal and vertical locations within a poured-in-place mold cavity and keep them in position while hardenable material is being poured into and allowed to harden within the mold cavity. Hibbard does not recognize the problem addressed by Applicant.

A primary object of the Hibbard invention is to provide an efficient method of securely positioning insulation panels between the concrete forming panels. This produces a composite, insulated, concrete wall in which the outer layers are bonded together with the inner layer of insulation by transverse reinforcing members (that is, vertical ladders 18) to provide a monolithic

wall structure upon completion. Ladders 18 must be placed normal to the opposed molding surfaces. The assembly and method for forming such a composite wall structure is completely different from Applicant's assembly and produces a completely different type of concrete poured-in-place wall at a much greater expense of time, labor, and materials.

The Hibbard concrete insulated composite wall comprises: (a) an insulation core having a predetermined thickness and extending the full horizontal length and vertical height of the wall with a plurality of insulation panels; (b) an outer concrete layer is on a first side of the insulation core; and (c) an inner concrete layer is on a second side of the insulation core.

Hibbard's structure and method are for fixedly positioning a plurality of insulation panels 20,21 (each 2 feet wide) between opposed inner molding surfaces of two outer molding panels 60/62 (each 2 feet wide) for forming a concrete insulated composite wall. Hibbard's overall structure is laboriously built two (2) feet at a time. The interface between each panel 20,21 must be a tightly abutting junction such that no substantial thermal leakage can occur. At each interface between panels 20,21 there is transversely positioned a vertical ladder 18 which extends through junction 22 between individual insulation panels 20,21.

In continuously forming the wall of the Hibbard invention, insulation core 12 is positioned medially between a pair of concrete forms 60,62. Vertical ladders 18 are set between adjacent panels of insulation 20,21 to extend transversely into the opening between insulation core 12 and each concrete form 60,62. Horizontal trusses 64 perform a dual purpose in Hibbard's method of forming. Their primary function is to accurately space and maintain forms 60,62 a fixed distance apart equal to the width W of wall 10. So, unlike Applicant's wall forming unit, assembly of Hibbard's desired mold cavity must be completed section by section.

Tangs 66,68 formed in truss 64, best shown in Hibbard Figure 2, receive vertical members 24,26 of vertical ladder 18, thus transversely fixing Hibbard's structure in place – exactly medial of wall 10. Tangs 66,68 provide a slot of the exact width of vertical member 24 such that truss 64 may be bolted through hole 71 to one form 62 and then rotated downward to engage vertical members 26,24 into tangs 66,68. This precisely and rigidly positions an inner lattice made up of ladders 18 and core 12. It also makes subsequent positioning of the other form 60 simple and precise since truss 64 is held in an exact perpendicular orientation to forms 60,62 by vertical ladder 18.

Vertical ladders 18 are positioned one at a time to extend transversely of and between

adjacent insulation panels for the predetermined vertical height of the wall. Each vertical ladder has a pair of parallel vertical members 24,26 and a plurality of cross members 28 spaced vertically apart and rigidly connected on each end to the parallel vertical members. Vertical ladders 18 have a width less than the predetermined width of the wall (so they do not touch the molding surfaces of forms 60/62, let alone being suspended from them) and is greater than the width of the insulation core 20/21. So the horizontal ladders 30,32 are compressively positioned between the vertical members 24,26 of vertical ladder 18 and insulation core 20,21 to hold the core in place between opposed wall forming panels 60/62. Each horizontal ladder has a multiplicity of openings along its horizontal length to allow free flow of hardenable concrete through the openings.

The Examiner's Comments on Hibbard

The examiner states that Hibbard discloses an assembly for producing a vertically disposed poured-in-place wall structure to have "horizontally disposed reinforcing ribs having horizontally disposed reinforcement rods 28." It is not clear what the "reinforcing ribs" are, and ladder structures 18 have "rigid cross members 28" that Hibbard doesn't characterize as "reinforcement rods." (*See* Hibbard col. 4, ls. 1-9.)

Even if rigid cross members 28 are deemed "reinforcement rods," they are not "freely contiguously disposed on said grid means ... within said mold cavity," as Applicant claims. For rigid cross members 28 are fixedly attached to vertical members 24,26 of ladder structures 18. And cross members 28 do not "extend parallel to said molding surfaces" as Applicant claims, but extend perpendicular to said molding surfaces. In short, unlike Hibbard, Applicant's grid means is distinguishable from and something in addition to Applicant's claimed reinforcement rods.

Moreover, cross members 28 must support horizontal ladders 30,32 that compressively fit between vertical member 24 of vertical ladder 18 and insulation core 12 to provide lateral support to the insulation core and to prevent any transverse movement of insulation core 20,21 during the pouring of concrete layers 14,16. Lateral support for core 12 is shown in Hibbard Figures 1 and 2 by pairs of horizontal ladders 30,32 positioned against opposite lateral surfaces 34,36 of insulation core 12. (See Hibbard col. 4, ls. 29-37.)

The examiner states that the Hibbard assembly comprises the following structure that is erroneously likened to Applicant's structure.

1. Wall molding means including vertically disposed laterally spaced wall forming panels 60/62

to provide molding surfaces along opposed sides of the wall mold cavity. Applicant's claimed assembly includes opposes molding surfaces.

2. A plurality of grid means 18/28/24/26 "suspended along the vertically disposed molding surfaces in the cavity." As discussed above, elements "18/28/24/26" comprise vertical ladders 18 that **do not suspend from the molding surfaces** along opposed sides of the wall mold cavity provided by forming panels 60/62. The examiner states that the elements 18/28/24/26 are "for contiguously supporting said horizontal reinforcement rods (she notes as cross members 28) which are freely contiguously disposed at a plurality of vertically spaced locations." As noted above, cross members 28 are not "freely contiguously disposed on said grid means ... within said mold cavity" but rigidly attached to vertical members 24,26, and are normal to the molding surfaces and not substantially parallel to them.

3. "Regarding claim 2: as far as understood, the grid means also extends vertically along the molding surfaces." As explained, Hibbard ladders 18 do not extend vertically along the molding surfaces since they don't even touch them.

4. Hibbard's cavity has an upwardly directed top opening like Applicant's.

5. Hibbard's panels 60/62 are portable and joined by elements 64/71 making the assembling and dismantling of Hibbard's structure labor intensive and prolonged. Unlike Hibbard's panel fastening means, Applicant's molding panels are held together by means for attaching the grid means to the molding panels.

6. Here the examiner no longer limits the Hibbard "grid means" to "18/28/24/26" but now characterizes Hibbard's "grid means" as 40/42/18. Horizontal ladders 30,32 are composed of a pair of lengthwise extending rods 40,42 connected by a plurality of transverse members 44. Horizontal ladders 30,32 must be substantially equal to the distance between vertical member 24 of vertical ladder 18 and the insulation core outer wall 34 to provide support to the core. Hibbard's so-called "grid means" do not support concrete reinforcing rods. For Hibbard states that "reinforcing support to the concrete layers" "may conveniently be provided by laying horizontal reinforcing bars 70 on the vertical ladder cross members 28 as well as on the truss 64. The reinforcing bars 70 may conveniently be placed on cross members 28 which are not fitted with horizontal ladders 30,32." (See Hibbard col. 7, ls. 26-31.) Thus, no consistency exists regarding the purpose of Hibbard "grid means" 40/42/18. Since none of

the Hibbard "grid means" are suspended along the molding surfaces of panels 60/62, the foregoing observations are deemed moot.

7. The examiner states that "as far as understood, the reinforcement rods (not specified) are horizontally and freely disposed across said plurality of grid means (not specified other then 18/28/24/26 and 40/42/18). It is respectfully noted that the application of the vertical and horizontal ladder structures used to fixedly locate the insulation core sections medially of forming panels 60/62 is strained and over-reaching when the examiner attempts to equate the ladders to Applicant's grid means that are suspended along molding surfaces of forming panels like panels 60/62. **No Hibbard structural configuration and its functional results can properly be likened to Applicant's claimed structural configuration and its functional results between similar forming panels.**

8. The examiner does not specify which Hibbard "reinforcement rods extend parallel to the molding surfaces 60/62 [that] are laterally spaced with respect to each other between the molding surfaces." In fact, unlike Applicant, Hibbard treats his reinforcing rods or bars 70 as completely optional and unrelated to his vertical and horizontal ladder structures.

9. The examiner erroneously states that the Hibbard "grid means includes a plurality of grid elements 40/42/18 extending vertically along/between the molding surfaces." First, elements 40/42 extend horizontally, not vertically, between the molding surfaces. (*See* Hibbard col. 4, ls. 47-50.) Secondly, "along" and "between" are not equivalent terms as the examiner suggests. "Along" implicitly suggests that the elements are attached to the molding surfaces. "Between" simply suggests that they are positioned intermediately the molding surfaces. Moreover, elements 40/42/18 do not ***suspend*** "along" ***or*** "between" the molding surfaces of forming panels 60/62. So Hibbard does not disclose "grid means" as Applicant claims.

10. The examiner inaccurately states that "each of the [Hibbard] grid element (sic) 40/42 [are] fixedly attached to a plurality of tie members 52/54 that are perpendicular to the molding surface (sic)." First, lock pins 52/54 are not "tie members" as that term is commonly used in the poured-in-place concrete wall-forming field. Secondly, lock pins 52/54 are parallel to molding surfaces and not "perpendicular to the molding surface (sic)." Thirdly, lock pins 52/54 simply preclude movement between horizontal ladder 30 and cross members 28, and ladder 30 with lengthwise rods 40/42 are not "fixedly attached" to lock pins 52/54, but are

attached to cross members 28 by lock pins 52/54. (*See* Hibbard col. 5, ls. 26-30.) Moreover, ladders 30 are "horizontally disposed at spaced, pre-selected vertical location (sic)" to support core 20/21 and ***NOT*** to be "for contiguously and freely contiguously disposed reinforcement rods." (This phraseology is not understood. For ladders 30 are either "fixedly attached" or "freely contiguously disposed." Not both.) Hibbard fixedly attaches ladders 30 to cross member 28 with lock pins 52/54, while he freely contiguously disposes reinforcing rods 70 at locations other than where his horizontal ladders 30 are fixedly disposed.

11. The examiner inaccurately characterizes Hibbard "grid elements [as] rod locating means 24/26" when they are really vertical rods 24,26 to which cross members 28 are fixedly attached to form ladder structure 18. Applicant's rod locating means specifically locate his horizontally disposed reinforcement rods that are parallel to the molding surfaces. The examiner mis-characterizes Hibbard cross members 28 as "reinforcement rods 28" that are perpendicular, not parallel to the molding surfaces, and do not ***suspend*** vertically along those molding surfaces as Applicant claims.

12. Finally, the examiner totally mis-characterizes Hibbard's vertical members 24,26 that are rigidly attached to horizontal cross members 28 to form ladder structures 18 as "rod locating means 24/26." The examiner then inaccurately states that Hibbard's members 24/26 are "a pair of parallel vertically disposed elongate elements fixedly extending across the tie members 52/53 (sic) at each horizontal location between the molding surfaces." In reality, vertical members 24,26 fixedly extend across cross members 28, not lock pins 52,54. And, in fact, vertical members 24, 26 are parallel to lock pins 52/54, and do not extend across lock pins 52/54. Neither of vertical elongate members 24,26 locate the position of Hibbard reinforcing rods 70 on cross members 28 as shown in Hibbard Figure 4.

Again, the examiner states that "Hibbard lacks the means for attaching the grid means to the opposed panels 60/62 to retain the rods in place at a plurality of vertically spaced locations while the hardenable material is poured into the cavity and allowed to harden." Applicant asks the question, "What grid means?" As shown, Hibbard discloses no "grid means" that performs the functions recited in Applicant's claims. Moreover, "Why would anyone want to attach Hibbard's "grid means" (whatever they are) to the opposed panels 60/62." For Hibbard discloses no reason for attaching a "grid means" to the opposed panels 60/62 for retaining horizontally, freely, contiguously disposed reinforcement rods in place at a plurality of vertically spaced locations while hardenable

material is poured in the mold cavity and allowed to harden. Nothing in Hibbard suggests to one having ordinary skill in the art to want to perform such a function. That is the essence of Applicant's invention that is revolutionizing the field of poured-in-place wall structures making it possible to produce a concrete building fit for occupancy that can be completed within three (3) to four (4) days from entry onto a building site.

Wepf Patent 4,234,156

Wepf discloses a multiplicity of specially designed tie bars 10 first individually attached at desired locations to a first molding surface and vertical rods 80,82 are then tied to bars 10 as shown in Wepf Figures 1 and 2. The process involves a first laborious disposition of tie bars 10 and a further tedious disposition of the vertical reinforcement rods 80,82. Wepf then explains the next step of the lengthy assembling process required by the Wepf structural configuration.

> Once all the vertical rods of grid 18 have been located by tying the same to the moulded member 24 of several ties as may be appropriate, the horizontal rod of the grid may be positioned and tied in place by tying the horizontal rods to the vertical rods as required. The diameter of the flange portions 52 and 54 of the moulded member 24 is kept sufficiently small that it does not interfere with the horizontal rod which may thus be tied to the vertical rod at any convenient location. The methods of tying reinforcing rods are well understood by those skilled in the art. This method may be easily adopted to tying the rods to the tie bar.

(Wepf col. 5, ls.38-49.)

So Wepf specifically teaches away from Applicant's claimed freely contiguous disposition of his horizontal reinforcement rods on his grid means.

Moreover, Wepf does not disclose structure as now presented Applicant's claim 1; namely, "a plurality of grid means suspended along the vertically disposed molding surfaces in said mold cavity for contiguously supporting said horizontally extending reinforcement rods which extend substantially parallel to said molding surfaces and are freely contiguously disposed on said grid means at a plurality of vertically spaced locations within said mold cavity." Nor does Wepf disclose a means for attaching "said grid means to said opposed wall forming panels to retain said reinforcement rods in place at said plurality of vertically spaced locations while said hardenable material is being poured into said mold cavity and allowed to harden."

The Examiner's Comments on Wepf

The examiner inaccurately states: "Wept discloses a wall molding means with opposed walls 12/14 and a grid (sic) 16/18 which is attached to the opposed panels to retain the rods in place at a plurality of vertically spaced locations while the hardenable material is poured into the mold cavity."

In Wepf Figure 1, grids 16/18 are ***NOT*** "attached to the opposed panels" 12/14. Tie bars 10 are attached to panels 12/14, and vertical reinforcement rods are connected to bars 10 with horizontal reinforcement rods of reinforcement grid 16/18 being connected to vertical rods thus teaching that the horizontal reinforcement rods are not contiguously disposed on tie bars 10 as claimed.

Conclusion

In view of the foregoing, withdrawal of the Finality of the outstanding office action for the reasons stated, and entry of the proposed current claim amendments is requested; re-institution of claims 9-10, 14-16, 28-29, and 31-35 is requested; and withdrawal of the rejection of claims 1, 3-7, and 48-50 under 35 U.S.C. § 103 as being unpatentable over Hibbard (4,768,324) in view of Wepf (4,234,156) for the reasons stated is respectfully asked.

Respectfully submitted,

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